10/713,861
Wood 12/15/06

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     (FILE 'HOME' ENTERED AT 13:56:40 ON 15 DEC 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 13:56:55 ON 15
     DEC 2006
L1          1843 S CY3 AND CY5
L2            33 S L1 AND REVIEW?
L3            75 S L1 AND PH
L4            62 S L1 AND CHARGE?
L5             5 S L3 AND L4
L6             2 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)
L7            25 S L1 AND PD<1996
L8            10 DUPLICATE REMOVE L7 (15 DUPLICATES REMOVED)

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ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 8
AN 1993:142766 CAPLUS
DN 118:142766
ED Entered STN: 13 Apr 1993
TI Cyanine dye labeling reagents: Sulfoindocyanine succinimidyl esters
AU Mujumdar, Ratnakar B.; Ernst, Lauren A.; Mujumdar, Swati R.; Lewis, Christopher J.; Waggoner, Alan S.
CS Dep. Biol. Sci., Carnegie Mellon Univ., Pittsburgh, PA, 15213, USA
SO Bioconjugate Chemistry (1993), 4(2), 105-11
CODEN: BCCHES; ISSN: 1043-1802
DT Journal
LA English
CC 9-5 (Biochemical Methods)
AB The synthesis and properties of a series of new fluorescent labeling reagents based on sulfoindocyanine dyes are described. They contain succinimidyl ester reactive groups and can be readily conjugated to antibodies, avidin, DNA, lipids, polymers, and other amino-group-containing materials. The labeling reagents are water soluble, pH insensitive, and show much reduced dye aggregation under labeling conditions. One of the reagents, Cy3, can be excited with the 488-, 514-, and 532-nm laser lines and is optimally excited with the 546-nm mercury arc line. Another, Cy5, can be excited with the 633-nm HeNe and 647-nm Kr laser lines available with many flow cytometers and confocal laser-scanning microscopes. New laser diodes emitting near 650 nm should also be excellent excitation sources for Cy5.
ST sulfoindocyanine succinimidyl ester fluorescent label; cyanine dye labeling reagent biochem
IT Antibodies
Proteins, reactions
RL: ANST (Analytical study)
(labeling of, with sulfoindocyanine dyes)
IT Fluorescent substances
(sulfoindocyanine dye-based, prepn of, for biochem.)
IT Dyes, cyanine
(sulfoindocyanine succinimidyl esters, preparation of, for biochem.)
IT Immunoglobulins
RL: ANST (Analytical study)
(G, labeling of, with sulfoindocyanine dyes)
IT 146368-14-1 146368-15-2 146368-16-3 146397-20-8
RL: ANST (Analytical study)
(as cyanine dye labeling reagent for biochem.)
IT 146368-17-4 146368-18-5
RL: ANST (Analytical study)
(condensation of, with carboxypentynyltrimethylindoleninium sulfonate)
IT 74124-79-1, Disuccinimidyl carbonate
RL: ANST (Analytical study)
(in succinimidyl esters of carboxyalkylcyanine dyes preparation)
IT 146368-10-7P 146368-11-8P 146368-12-9P 146368-13-0P 146397-18-4P 146397-19-5P
RL: PREP (Preparation)
(preparation of, as cyanine dye labeling reagent for biochem.)
IT 146368-09-4P 146397-21-9P
RL: PREP (Preparation)
(preparation of, as intermediate for preparation of cyanine dye labeling reagent)
IT 76588-81-3P 132557-72-3P 146368-07-2P 146368-08-3P
RL: PREP (Preparation)
(preparation of, as intermediate for preparation of sulfocyanine dye)
IT 146397-17-3P
RL: PREP (Preparation)
(preparation of, for biochem. applications)
IT 122-51-0, Triethylorthoformate 51143-35-2, Glutaconaldehyde dianil hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with carboxypentynyltrimethylindoleninium sulfonate)

IT 51143-32-9, Malonaldehyde dianil hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethyltrimethylindoleninium sulfonate)

IT 563-80-4, 3-Methyl-2-butanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrazinobenzenesulfonic acid)

IT 98-71-5, p-Hydrazinobenzenesulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylbutanone)

IT 75-03-6, Ethyl iodide 1633-83-6 4224-70-8, 6-Bromohexanoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium salt of trimethylindoleninium sulfonate)

IT 622-15-1, N,N'-Diphenylformamidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with quaternary salt of indolenine)

ANSWER 8 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 7
AN 1993:407576 BIOSIS
DN PREV199396073301
TI A novel fluorescence ratiometric method confirms the low solvent viscosity of the cytoplasm.
AU Luby-Phelps, Katherine [Reprint author]; Mujumdar, Swati; Mujumdar, Ratnakar B.; Ernst, Lauren A.; Galbraith, William; Waggoner, Alan S.
CS Dep. Physiol., Univ. Tex. Southwestern Med. Cent., 5323 Harry Hines Blvd., Dallas, TX 75235-9040, USA
SO Biophysical Journal, (1993) Vol. 65, No. 1, pp. 236-242.
CODEN: BIOJAU. ISSN: 0006-3495.
DT Article
LA English
ED Entered STN: 8 Sep 1993
Last Updated on STN: 8 Sep 1993
AB Two homologous indocyanine dyes, Cy3.18 and Cy5.18, can be used as a ratio pair for fluorometric determination of solvent viscosity. Succinimidyl ester derivatives of these dyes can be attached to inert carrier macromolecules, such as Ficoll 70, for measurement of intracellular or intravesicular solvent viscosity. When the viscosity of the solvent was varied by various methods, the fluorescence intensity ratio (Cy3/Cy5) in a mixture of Cy3 .18-Ficoll 70 (Cy3F70) and Cy5.18-Ficoll 70 (Cy5F70) in solution was found to be solely a function of solvent viscosity and was insensitive to other solvent parameters such as dielectric constant, temperature, and the ability of the solvent to form hydrogen bonds. Most important, it was insensitive to the presence of large macromolecules, such as proteins, which increase the shear viscosity but have little effect on solvent viscosity. Following microinjection into the cytoplasm of living tissue culture cells, no binding of Cy3F70 or Cy5F70 to intracellular components was detected by fluorescence recovery after photobleaching. Fluorescence intensity ratio imaging of Cy3F70 and Cy5F70 in nonmotile interphase CV1 and PtK-1 cells showed that the solvent viscosity of cytoplasm was not significantly different from water and showed no spatial variation.
CC Microscopy - Cytology and cytochemistry 01054
Cytology - Animal 02506
Biophysics - General 10502
Biophysics - Methods and techniques 10504
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Methods and Techniques
IT Miscellaneous Descriptors
CONNEXON; LIPID MEMBRANE; LIVER; MEMBRANE CHANNEL; ULTRASTRUCTURE
ORGN Classifier
Cercopithecidae 86205
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Cercopithecidae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Mammals, Nonhuman Vertebrates, Nonhuman Primates, Primates, Vertebrates
ORGN Classifier
Heteromyidae 86360
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Heteromyidae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
ORGN Classifier
Muridae 86375

Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 4 OF 10 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 4

AN 94353286 EMBASE
DN 1994353286
TI Double-label immunofluorescence with the laser scanning confocal microscope using cyanine dyes.
AU Sargent P.B.
CS Department of Stomatology, University of California,San Francisco, CA 94143, United States
SO NeuroImage, (1994) Vol. 1, No. 4, pp. 288-295. .
ISSN: 1053-8119 CODEN: NEIMEF
CY United States
DT Journal; Article
FS 001 Anatomy, Anthropology, Embryology and Histology
002 Physiology
008 Neurology and Neurosurgery
LA English
SL English
ED Entered STN: 21 Dec 1994
Last Updated on STN: 21 Dec 1994
AB The laser scanning confocal microscope, when used with the krypton-argon ion laser, is well suited for the simultaneous detection of pairs of antigens by immunofluorescence. Traditionally, double-label studies have utilized secondary antibodies conjugated to fluorescein isothiocyanate (FITC), excited by the 488-nm line (blue), and to tetramethyl rhodamine isothiocyanate or Texas Red, excited by the 568-nm line (yellow). However, the use of fluorophores excited by the 488 nm line produces unsatisfactory results when tissue contains low wavelength-excitable autofluorescence. In the amphibian cardiac ganglion, for example, autofluorescent granules within parasympathetic neurons obscure cell surface-derived signals and prevent one from analyzing the relative position of acetylcholine receptor clusters and synaptic boutons by double-label immunofluorescence. This problem has been solved by using cyanine 3.18 (Cy3)- and cyanine 5.18 (Cy5)-conjugated secondary antibodies, which are excited efficiently by the 568-nm (yellow) and the 647-nm (red) lines and which emit in the orange/red and in the far-red, respectively, and thus by avoiding the 488-nm line altogether. The resulting images are as good or better than those obtained with FITC and Texas Red, even without consideration of autofluorescence.
CT Medical Descriptors:
*ganglion
*heart
animal cell
animal tissue
article
controlled study
frog
immunofluorescence
laser microscopy
priority journal
Drug Descriptors:
*cholinergic receptor

ANSWER 3 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3
AN 1994:258686 BIOSIS
DN PREV199497271686
TI Three-dimensional relationships between tumor cells and microcirculation with double cyanine immunolabeling, laser scanning confocal microscopy, and computer-assisted reconstruction: An alternative to cast corrosion preparations.
AU Rummelt, Volker; Gardner, Lynn M. G.; Folberg, Robert [Reprint author]; Beck, Steven; Knosp, Boyd; Moninger, Thomas O.; Moore, Kenneth C.
CS Univ. Iowa, Room 233 Med. Res. Cent., Iowa City, IA 52242-1182, USA
SO Journal of Histochemistry and Cytochemistry, (1994) Vol. 42, No. 5, pp. 681-686.
CODEN: JHCYAS. ISSN: 0022-1554.
DT Article
LA English
ED Entered STN: 8 Jun 1994
Last Updated on STN: 9 Jun 1994
AB The morphology of the microcirculation of uveal melanomas is a reliable marker of tumor progression. Scanning electron microscopy of cast corrosion preparations can generate three-dimensional views of these vascular patterns, but this technique sacrifices the tumor parenchyma. Formalin-fixed wet tissue sections 100-150 mu-m thick from uveal melanomas were stained with the lectin Ulex europaeus agglutinin I (UEAI) and proliferating cell nuclear antigen (PCNA) to demonstrate simultaneously the tumor blood vessels and proliferating tumor tells. Indocarbocyanine (Cy3) was used as a fluorophore for UEAI and indodicarbocyanine (Cy5) was used for PCNA. Double labeled sections were examined with a laser scanning confocal microscope. Images of both stains were digitized at the same 5-gm intervals and each of the two images per interval was combined digitally to form one image. These combined images were visualized through voxel processing to study the relationship between melanoma cells expressing PCNA and various microcirculatory patterns. This technique produces images comparable to scanning electron microscopy of cast corrosion preparations while permitting simultaneous localization of melanoma cells expressing PCNA. The microcirculatory tree can be viewed from any perspective and the relationship between tumor cells and the tumor blood vessels can be studied concurrently in three dimensions. This technique is an alternative to cast corrosion preparations.
CC General biology - Information, documentation, retrieval and computer applications 00530
Microscopy - Electron microscopy 01058
Cytology - Human 02508
Radiation biology - Radiation and isotope techniques 06504
Anatomy and Histology - Microscopic and ultramicroscopic anatomy 11108
Sense organs - General and methods 20001
Sense organs - Pathology 20006
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Biochemistry 24006
Immunology - General and methods 34502
IT Major Concepts
Cell Biology; Computer Applications (Computational Biology); Immune System (Chemical Coordination and Homeostasis); Morphology; Oncology (Human Medicine, Medical Sciences); Radiology (Medical Sciences); Sense Organs (Sensory Reception)
IT Chemicals & Biochemicals
CYANINE
IT Miscellaneous Descriptors
ANALYTICAL METHOD; IMMUNOLOGIC METHOD; SCANNING ELECTRON MICROSCOPY; UVEAL MELANOMA
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 523-42-2Q (CYANINE)
581-64-6Q (CYANINE)

ANSWER 5 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 5
AN 1995:127361 BIOSIS
DN PREV199598141661
TI Imaging in the far-red with electronic light microscopy: Requirements and limitations.
AU Cullander, C.
CS Dep. Pharmacy, Pharmaceutical Chem., Univ. California, San Francisco, CA 94143, USA
SO Journal of Microscopy (Oxford), (1994) Vol. 176, No. 3, pp. 281-286.
CODEN: JMICAR. ISSN: 0022-2720.
DT Article
LA English
ED Entered STN: 29 Mar 1995
Last Updated on STN: 23 May 1995
AB The acquisition of simultaneous dual confocal images with red and far-red light has both advantages (e.g. lower autofluorescence) and limitations. An understanding of these requisites is necessary to acquire high-quality images and to avoid the misinterpretation of experimental data. The poor detection of far-red light mandates a high optical transfer efficiency for the system, thus the transmittance of the objective lens and its axial and lateral chromatic aberration in the far-red are important factors for consideration. This technical note is an attempt to 'demystify' the process of filter set design for confocal microscopy by discussing the considerations that went into the construction of a filter set for use with the reagents cyanine 3.18 (Cy3) and cyanine 5.18 (Cy5), and thus to encourage users to look beyond the multi-purpose designs available commercially. The 5 68-nm laser line exciting Cy 3 is at its emission maximum, which limits the collectable Cy3 fluorescence. High-transmission optical filters with sharp band pass cutoffs are thus desirable for maximum fight throughput. Light path mirror efficiency rapidly degrades above 700 nm, but the loss of this portion of the Cy5 emission spectrum is acceptable since the fluorophore is very bright, and these very long wavelengths are also likely to introduce aberration. While resolution is decreased with far-red fight, there is also greater penetration and less scattering, and it is thus possible to obtain high-quality images from deeper within the specimen. Although only one make and model of confocal microscope (the Bio-Rad MRC-600) is considered, similar considerations pertain to the design of filter sets for any confocal microscope that accommodates user-installed filters.
CC Methods - Photography 01012
Microscopy - General and special techniques 01052
Mathematical biology and statistical methods 04500
Radiation biology - Radiation and isotope techniques 06504
Radiation biology - Radiation effects and protective measures 06506
Biophysics - General 10502
Biophysics - Methods and techniques 10504
Biophysics - Bioengineering 10511
External effects - Light and darkness 10604
External effects - Electric, magnetic and gravitational phenomena 10610
IT Major Concepts
Biochemistry and Molecular Biophysics; Equipment, Apparatus, Devices and Instrumentation; Mathematical Biology (Computational Biology); Methods and Techniques; Radiation Biology; Radiology (Medical Sciences)
IT Chemicals & Biochemicals
CYANINE-3.18
IT Miscellaneous Descriptors
ABERRATION; CONFOCAL MICROSCOPY; CYANINE-3.18; CYANINE-5.18; FLUORESCENT REAGENTS; OPTICAL FILTERS; TRANSMITTANCE
RN 146397-17-3 (CYANINE-3.18)
144637-64-9 (CYANINE-3.18)

10/713,861
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L/Cook 12/16/06

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     (FILE 'HOME' ENTERED AT 13:56:40 ON 15 DEC 2006)

     FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 13:56:55 ON 15
     DEC 2006
L1          1843 S CY3 AND CY5
L2            33 S L1 AND REVIEW?
L3            75 S L1 AND PH
L4            62 S L1 AND CHARGE?
L5             5 S L3 AND L4
L6             2 DUPLICATE REMOVE L5 (3 DUPLICATES REMOVED)
L7            25 S L1 AND PD<1996
L8            10 DUPLICATE REMOVE L7 (15 DUPLICATES REMOVED)

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ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 8
AN 1993:142766 CAPLUS
DN 118:142766
ED Entered STN: 13 Apr 1993
TI Cyanine dye labeling reagents: Sulfoindocyanine succinimidyl esters
AU Mujumdar, Ratnakar B.; Ernst, Lauren A.; Mujumdar, Swati R.; Lewis, Christopher J.; Waggoner, Alan S.
CS Dep. Biol. Sci., Carnegie Mellon Univ., Pittsburgh, PA, 15213, USA
SO Bioconjugate Chemistry (1993), 4(2), 105-11
CODEN: BCCHES; ISSN: 1043-1802
DT Journal
LA English
CC 9-5 (Biochemical Methods)
AB The synthesis and properties of a series of new fluorescent labeling reagents based on sulfoindocyanine dyes are described. They contain succinimidyl ester reactive groups and can be readily conjugated to antibodies, avidin, DNA, lipids, polymers, and other amino-group-containing materials. The labeling reagents are water soluble, pH insensitive, and show much reduced dye aggregation under labeling conditions. One of the reagents, Cy3, can be excited with the 488-, 514-, and 532-nm laser lines and is optimally excited with the 546-nm mercury arc line. Another, Cy5, can be excited with the 633-nm HeNe and 647-nm Kr laser lines available with many flow cytometers and confocal laser-scanning microscopes. New laser diodes emitting near 650 nm should also be excellent excitation sources for Cy5.
ST sulfoindocyanine succinimidyl ester fluorescent label; cyanine dye labeling reagent biochem
IT Antibodies
Proteins, reactions
RL: ANST (Analytical study)
(labeling of, with sulfoindocyanine dyes)
IT Fluorescent substances
(sulfoindocyanine dye-based, prepn of, for biochem.)
IT Dyes, cyanine
(sulfoindocyanine succinimidyl esters, preparation of, for biochem.)
IT Immunoglobulins
RL: ANST (Analytical study)
(G, labeling of, with sulfoindocyanine dyes)
IT 146368-14-1 146368-15-2 146368-16-3 146397-20-8
RL: ANST (Analytical study)
(as cyanine dye labeling reagent for biochem.)
IT 146368-17-4 146368-18-5
RL: ANST (Analytical study)
(condensation of, with carboxypentynyltrimethylindoleninium sulfonate)
IT 74124-79-1, Disuccinimidyl carbonate
RL: ANST (Analytical study)
(in succinimidyl esters of carboxyalkylcyanine dyes preparation)
IT 146368-10-7P 146368-11-8P 146368-12-9P 146368-13-0P 146397-18-4P 146397-19-5P
RL: PREP (Preparation)
(preparation of, as cyanine dye labeling reagent for biochem.)
IT 146368-09-4P 146397-21-9P
RL: PREP (Preparation)
(preparation of, as intermediate for preparation of cyanine dye labeling reagent)
IT 76588-81-3P 132557-72-3P 146368-07-2P 146368-08-3P
RL: PREP (Preparation)
(preparation of, as intermediate for preparation of sulfocyanine dye)
IT 146397-17-3P
RL: PREP (Preparation)
(preparation of, for biochem. applications)
IT 122-51-0, Triethylorthoformate 51143-35-2, Glutaconaldehyde dianil hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with carboxypentynyltrimethylindoleninium sulfonate)

IT 51143-32-9, Malonaldehyde dianil hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethyltrimethylindoleninium sulfonate)

IT 563-80-4, 3-Methyl-2-butanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrazinobenzenesulfonic acid)

IT 98-71-5, p-Hydrazinobenzenesulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylbutanone)

IT 75-03-6, Ethyl iodide 1633-83-6 4224-70-8, 6-Bromohexanoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with potassium salt of trimethylindoleninium sulfonate)

IT 622-15-1, N,N'-Diphenylformamidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with quaternary salt of indolenine)

ANSWER 8 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 7
AN 1993:407576 BIOSIS
DN PREV199396073301
TI A novel fluorescence ratiometric method confirms the low solvent viscosity of the cytoplasm.
AU Luby-Phelps, Katherine [Reprint author]; Mujumdar, Swati; Mujumdar, Ratnakar B.; Ernst, Lauren A.; Galbraith, William; Waggoner, Alan S.
CS Dep. Physiol., Univ. Tex. Southwestern Med. Cent., 5323 Harry Hines Blvd., Dallas, TX 75235-9040, USA
SO Biophysical Journal, (1993) Vol. 65, No. 1, pp. 236-242.
CODEN: BIOJAU. ISSN: 0006-3495.
DT Article
LA English
ED Entered STN: 8 Sep 1993
Last Updated on STN: 8 Sep 1993
AB Two homologous indocyanine dyes, Cy3.18 and Cy5.18, can be used as a ratio pair for fluorometric determination of solvent viscosity. Succinimidyl ester derivatives of these dyes can be attached to inert carrier macromolecules, such as Ficoll 70, for measurement of intracellular or intravesicular solvent viscosity. When the viscosity of the solvent was varied by various methods, the fluorescence intensity ratio (Cy3/Cy5) in a mixture of Cy3 .18-Ficoll 70 (Cy3F70) and Cy5.18-Ficoll 70 (Cy5F70) in solution was found to be solely a function of solvent viscosity and was insensitive to other solvent parameters such as dielectric constant, temperature, and the ability of the solvent to form hydrogen bonds. Most important, it was insensitive to the presence of large macromolecules, such as proteins, which increase the shear viscosity but have little effect on solvent viscosity. Following microinjection into the cytoplasm of living tissue culture cells, no binding of Cy3F70 or Cy5F70 to intracellular components was detected by fluorescence recovery after photobleaching. Fluorescence intensity ratio imaging of Cy3F70 and Cy5F70 in nonmotile interphase CV1 and PtK-1 cells showed that the solvent viscosity of cytoplasm was not significantly different from water and showed no spatial variation.
CC Microscopy - Cytology and cytochemistry 01054
Cytology - Animal 02506
Biophysics - General 10502
Biophysics - Methods and techniques 10504
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Methods and Techniques
IT Miscellaneous Descriptors
CONNEXON; LIPID MEMBRANE; LIVER; MEMBRANE CHANNEL; ULTRASTRUCTURE
ORGN Classifier
Cercopithecidae 86205
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Cercopithecidae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Mammals, Nonhuman Vertebrates, Nonhuman Primates, Primates, Vertebrates
ORGN Classifier
Heteromyidae 86360
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Heteromyidae
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
ORGN Classifier
Muridae 86375

Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
rat
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

ANSWER 4 OF 10 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 4

AN 94353286 EMBASE
DN 1994353286
TI Double-label immunofluorescence with the laser scanning confocal microscope using cyanine dyes.
AU Sargent P.B.
CS Department of Stomatology, University of California,San Francisco, CA 94143, United States
SO NeuroImage, (1994) Vol. 1, No. 4, pp. 288-295. .
ISSN: 1053-8119 CODEN: NEIMEF
CY United States
DT Journal; Article
FS 001 Anatomy, Anthropology, Embryology and Histology
002 Physiology
008 Neurology and Neurosurgery
LA English
SL English
ED Entered STN: 21 Dec 1994
Last Updated on STN: 21 Dec 1994
AB The laser scanning confocal microscope, when used with the krypton-argon ion laser, is well suited for the simultaneous detection of pairs of antigens by immunofluorescence. Traditionally, double-label studies have utilized secondary antibodies conjugated to fluorescein isothiocyanate (FITC), excited by the 488-nm line (blue), and to tetramethyl rhodamine isothiocyanate or Texas Red, excited by the 568-nm line (yellow). However, the use of fluorophores excited by the 488 nm line produces unsatisfactory results when tissue contains low wavelength-excitable autofluorescence. In the amphibian cardiac ganglion, for example, autofluorescent granules within parasympathetic neurons obscure cell surface-derived signals and prevent one from analyzing the relative position of acetylcholine receptor clusters and synaptic boutons by double-label immunofluorescence. This problem has been solved by using cyanine 3.18 (Cy3)- and cyanine 5.18 (Cy5)-conjugated secondary antibodies, which are excited efficiently by the 568-nm (yellow) and the 647-nm (red) lines and which emit in the orange/red and in the far-red, respectively, and thus by avoiding the 488-nm line altogether. The resulting images are as good or better than those obtained with FITC and Texas Red, even without consideration of autofluorescence.
CT Medical Descriptors:
*ganglion
*heart
animal cell
animal tissue
article
controlled study
frog
immunofluorescence
laser microscopy
priority journal
Drug Descriptors:
*cholinergic receptor

ANSWER 3 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3
AN 1994:258686 BIOSIS
DN PREV199497271686
TI Three-dimensional relationships between tumor cells and microcirculation with double cyanine immunolabeling, laser scanning confocal microscopy, and computer-assisted reconstruction: An alternative to cast corrosion preparations.
AU Rummelt, Volker; Gardner, Lynn M. G.; Folberg, Robert [Reprint author]; Beck, Steven; Knosp, Boyd; Moninger, Thomas O.; Moore, Kenneth C.
CS Univ. Iowa, Room 233 Med. Res. Cent., Iowa City, IA 52242-1182, USA
SO Journal of Histochemistry and Cytochemistry, (1994) Vol. 42, No. 5, pp. 681-686.
CODEN: JHCYAS. ISSN: 0022-1554.
DT Article
LA English
ED Entered STN: 8 Jun 1994
Last Updated on STN: 9 Jun 1994
AB The morphology of the microcirculation of uveal melanomas is a reliable marker of tumor progression. Scanning electron microscopy of cast corrosion preparations can generate three-dimensional views of these vascular patterns, but this technique sacrifices the tumor parenchyma. Formalin-fixed wet tissue sections 100-150 mu-m thick from uveal melanomas were stained with the lectin Ulex europaeus agglutinin I (UEAI) and proliferating cell nuclear antigen (PCNA) to demonstrate simultaneously the tumor blood vessels and proliferating tumor tells. Indocarbocyanine (Cy3) was used as a fluorophore for UEAI and indodicarbocyanine (Cy5) was used for PCNA. Double labeled sections were examined with a laser scanning confocal microscope. Images of both stains were digitized at the same 5-gm intervals and each of the two images per interval was combined digitally to form one image. These combined images were visualized through voxel processing to study the relationship between melanoma cells expressing PCNA and various microcirculatory patterns. This technique produces images comparable to scanning electron microscopy of cast corrosion preparations while permitting simultaneous localization of melanoma cells expressing PCNA. The microcirculatory tree can be viewed from any perspective and the relationship between tumor cells and the tumor blood vessels can be studied concurrently in three dimensions. This technique is an alternative to cast corrosion preparations.
CC General biology - Information, documentation, retrieval and computer applications 00530
Microscopy - Electron microscopy 01058
Cytology - Human 02508
Radiation biology - Radiation and isotope techniques 06504
Anatomy and Histology - Microscopic and ultramicroscopic anatomy 11108
Sense organs - General and methods 20001
Sense organs - Pathology 20006
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Biochemistry 24006
Immunology - General and methods 34502
IT Major Concepts
Cell Biology; Computer Applications (Computational Biology); Immune System (Chemical Coordination and Homeostasis); Morphology; Oncology (Human Medicine, Medical Sciences); Radiology (Medical Sciences); Sense Organs (Sensory Reception)
IT Chemicals & Biochemicals
CYANINE
IT Miscellaneous Descriptors
ANALYTICAL METHOD; IMMUNOLOGIC METHOD; SCANNING ELECTRON MICROSCOPY; UVEAL MELANOMA
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia

Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 523-42-2Q (CYANINE)
581-64-6Q (CYANINE)

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DUPLICATE 5
AN 1995:127361 BIOSIS
DN PREV199598141661
TI Imaging in the far-red with electronic light microscopy: Requirements and limitations.
AU Cullander, C.
CS Dep. Pharmacy, Pharmaceutical Chem., Univ. California, San Francisco, CA 94143, USA
SO Journal of Microscopy (Oxford), (1994) Vol. 176, No. 3, pp. 281-286.
CODEN: JMICAR. ISSN: 0022-2720.
DT Article
LA English
ED Entered STN: 29 Mar 1995
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AB The acquisition of simultaneous dual confocal images with red and far-red light has both advantages (e.g. lower autofluorescence) and limitations. An understanding of these requisites is necessary to acquire high-quality images and to avoid the misinterpretation of experimental data. The poor detection of far-red light mandates a high optical transfer efficiency for the system, thus the transmittance of the objective lens and its axial and lateral chromatic aberration in the far-red are important factors for consideration. This technical note is an attempt to 'demystify' the process of filter set design for confocal microscopy by discussing the considerations that went into the construction of a filter set for use with the reagents cyanine 3.18 (Cy3) and cyanine 5.18 (Cy5), and thus to encourage users to look beyond the multi-purpose designs available commercially. The 5 68-nm laser line exciting Cy 3 is at its emission maximum, which limits the collectable Cy3 fluorescence. High-transmission optical filters with sharp band pass cutoffs are thus desirable for maximum fight throughput. Light path mirror efficiency rapidly degrades above 700 nm, but the loss of this portion of the Cy5 emission spectrum is acceptable since the fluorophore is very bright, and these very long wavelengths are also likely to introduce aberration. While resolution is decreased with far-red fight, there is also greater penetration and less scattering, and it is thus possible to obtain high-quality images from deeper within the specimen. Although only one make and model of confocal microscope (the Bio-Rad MRC-600) is considered, similar considerations pertain to the design of filter sets for any confocal microscope that accommodates user-installed filters.
CC Methods - Photography 01012
Microscopy - General and special techniques 01052
Mathematical biology and statistical methods 04500
Radiation biology - Radiation and isotope techniques 06504
Radiation biology - Radiation effects and protective measures 06506
Biophysics - General 10502
Biophysics - Methods and techniques 10504
Biophysics - Bioengineering 10511
External effects - Light and darkness 10604
External effects - Electric, magnetic and gravitational phenomena 10610
IT Major Concepts
Biochemistry and Molecular Biophysics; Equipment, Apparatus, Devices and Instrumentation; Mathematical Biology (Computational Biology); Methods and Techniques; Radiation Biology; Radiology (Medical Sciences)
IT Chemicals & Biochemicals
CYANINE-3.18
IT Miscellaneous Descriptors
ABERRATION; CONFOCAL MICROSCOPY; CYANINE-3.18; CYANINE-5.18; FLUORESCENT REAGENTS; OPTICAL FILTERS; TRANSMITTANCE
RN 146397-17-3 (CYANINE-3.18)
144637-64-9 (CYANINE-3.18)